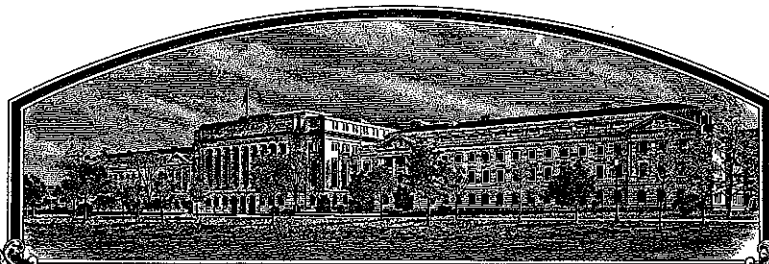


No.

200800004



# THE UNITED STATES OF AMERICA

**TO ALL TO WHOM THESE PRESENTS SHALL COME:**  
*University of Georgia Research Foundation, Inc.*

*Whereas*, THERE HAS BEEN PRESENTED TO THE  
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'8641'

*In Testimony Whereof, I have hereunto set my hand  
and caused the seal of the Plant Variety  
Protection Office to be affixed at the City of  
Washington, D.C. this twenty-ninth day of April,  
in the year two thousand and eight.*

*Attest:*

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE  
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

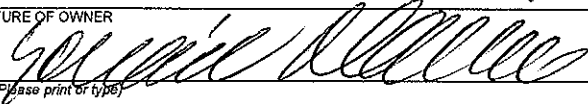
Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER <b>University of Georgia Research Foundation, Inc.</b>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME <b>GA96229-3A41</b>	3. VARIETY NAME <b>8641</b>
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) <b>627 Boyd Graduate Studies Research Center Athens, GA 30602-7411</b>		5. TELEPHONE (include area code) <b>(706) 542-1404</b>	<b>FOR OFFICIAL USE ONLY</b> PVPO NUMBER <b>#200800004</b> FILING DATE <b>October 16, 2007</b> <b>November 16, 2007</b>
		6. FAX (include area code) <b>(706) 542-3837</b>	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) <b>Corporation</b>	8. IF INCORPORATED, GIVE STATE OF INCORPORATION <b>Georgia</b>	9. DATE OF INCORPORATION <b>November 17, 1978</b>	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) <b>Sohail Malik Alisa Harkins University of Georgia Research Foundation, Inc. 627 Boyd Graduate Studies Research Center Athens, GA 30602-7411</b>			FILING AND EXAMINATION FEES: <b>\$4,382.00</b> DATE <b>10/16/07</b> CERTIFICATION FEE: <b>\$768.00</b> DATE <b>2/27/08</b>
11. TELEPHONE (Include area code) <b>(706) 542-1404</b>	12. FAX (Include area code) <b>(706) 542-3837</b>	13. E-MAIL <b>agh@cuga.edu</b>	
14. CROP KIND (Common Name) <b>Wheat (common)</b>	16. FAMILY NAME (Botanical) <b>Triticum aestivum</b>	18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP <b>Gramineae</b>	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act)	
a. <input type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input type="checkbox"/> Exhibit B. Statement of Distinctness c. <input type="checkbox"/> Exhibit C. Objective Description of Variety d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input type="checkbox"/> Exhibit F. Declaration Regarding Deposit g. <input type="checkbox"/> Voucher Sample (3,000 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) h. <input type="checkbox"/> Filing and Examination Fee (\$4,382), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		<input type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input checked="" type="checkbox"/> NO (If "no", go to item 23) <input type="checkbox"/> UNDECIDED	
		21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
		22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)	
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER 		SIGNATURE OF OWNER	
NAME (Please print or type) <b>Sohail Malik</b>		NAME (Please print or type)	
CAPACITY OR TITLE <b>Chief Licensing Officer</b>	DATE <b>11 OCT 2007</b>	CAPACITY OR TITLE	DATE

200860004

**GENERAL INSTRUCTIONS:** To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E, F; (3) for a tuber reproduced variety, verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; and (4) payment by credit card or check drawn on a U.S. bank for \$4,382 (\$518 filing fee and \$3,864 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice). **NEW:** With the application for a seed reproduced variety or by direct deposit soon after filing, the applicant must provide at least 3,000 viable untreated seeds of the variety *per se*, and for a hybrid variety at least 3,000 untreated seeds of each line necessary to reproduce the variety. Partial applications will be held in the PVPO for not more than 90 days; then returned to the applicant as un-filed. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. **Retain one copy for your files.** All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a payment by credit card or check payable to "Treasurer of the United States" in the amount of \$768 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

**NOTES:** It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

**Plant Variety Protection Office**  
**Telephone:** (301) 504-5518 **FAX:** (301) 504-5291  
**General E-mail:** PVPOmail@usda.gov  
**Homepage:** <http://www.ams.usda.gov/science/pvpo/PVPindex.htm>

#### SPECIFIC INSTRUCTIONS:

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and **provide evidence** that the permanent name of the application variety (even if it is a parental, inbred line) has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: U.S. Department of Agriculture, Agricultural Marketing Service, Livestock and Seed Programs, **Seed Regulatory and Testing Branch**, 801 Summit Crossing Place, Suite C, Gastonia, North Carolina 28054-2193 Telephone: (704) 810-8870. <http://www.ams.usda.gov/lsg/seed.htm>.

#### ITEM

- 19a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;  
 (2) the details of subsequent stages of selection and multiplication;  
 (3) evidence of uniformity and stability; and  
 (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;  
 (2) attach replicated statistical data for characters expressed numerically and demonstrate that these are clear differences; and  
 (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

**22. CONTINUED FROM FRONT** (Please provide a statement as to the limitation and sequence of generations that may be certified.)

N/a

**23. CONTINUED FROM FRONT** (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

N/a

**24. CONTINUED FROM FRONT** (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

N/a

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

### Origin and Breeding History of 96229-3A41

96229-3A41 winter wheat (*Triticum aestivum* L.), was developed and released by the Georgia Agricultural Experiment Stations in 2006. 96229-3A41 was derived from the cross, GA 881130 / 2\* GA 881582. The pedigree of GA 881130 is KSH8998 / FR 81-10 // Gore. KSH8998 was developed from the cross of the hard wheat with *Triticum tauchii* to transfer Hessian fly resistance (H13). FR 81-10 was selected due to its resistance to leaf rust (Lr37Yr17) from the cross: Novisad 138/4/(4)*Aegilops ventricosa*/*Triticum persicum*/2/Marve\*3/3/Moisson. The pedigree of GA 881582 is Coker 9134 / GA 801468-11-1 (Coker 762 / Holley).

The cross of 96229-3A41 was made in the fall of 1996. The F1 was grown during the fall of 1997. The population was advanced from the F2 through F5 generations using the pedigree method of breeding with individual spikes selected for resistance to leaf rust (caused by *Puccinia recondita* (Roberge ex Desmaz), stripe rust (caused by *Puccinia striiformis* Westend), powdery mildew (caused by *Erysiphe graminis* DC. f. sp. *tritici* Em. Marchal), and septoria nodorum blotch (caused by *Stagonospora nodorum* (Berk) Castellani & E.G. Germano). Spikes were harvested, threshed individually and planted in single 1 meter headrows and were advanced to the next generation during the F2:3-, F3:4-, and F4:5-derived lines at Plains, GA. 96229-3A41 is the F5:derived head row selected and advanced to Breeder Seed which was produced in the F10 generation.

96229-3A41 was evaluated as GA96229-3A41 for agronomic performance in nursery plots in 2002 and 2003, GA state trials at five locations from 2004 to 2005, and in the Uniform Southern Soft Red Winter Wheat Nursery at about 30 locations in 2005.

An increase strip of 96229-3A41 was planted in 2004 from a small increase plot and was rogued thoroughly for aberrant types. Seeds from this increase strip was planted in an increase block (2 acres) of 96229-3A41 in 2005 at the Foundation Seed Farm and rogued to remove variants. Seed from this large block was used for Breeder Seed for 96229-3A41 in 2006. 96229-3A41 has been observed for 3 generations of reproduction and during seed increase period and is stable and uniform. The variant consists of 1 bearded head per 20,000 heads, 1 late head per 20,000 heads and 1 early head per 5000.

This Breeder seed of 96229-3A41 was provided to the Georgia Seed Development Commission and will be the source of future seed multiplications. Breeder seed of 96229-3A41 will be maintained by the Georgia Agricultural Experiment Station, University of Georgia-Griffin Campus, Griffin, GA 30223-1797.

#200800004

**Exhibit B**

**Novelty Statement**

**96229-3A41 is a soft red winter wheat, apically awnletted, and white chaffed. 96229-3A41 is most similar in appearance to 'AGS 2000'; however, 96229-3A41 is apically awnletted whereas AGS 2000 is awned.**

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 2.5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705

Exhibit C

OBJECTIVE DESCRIPTION OF VARIETY  
Wheat (*Triticum* spp.)

NAME OF APPLICANT(S) University of Georgia Research Foundation, Inc.	TEMPORARY OR EXPERIMENTAL DESIGNATION GA96229-3A41	VARIETY NAME 8641
ADDRESS (Street and No. or RD No., City, State, Zip Code and Country) 627 Boyd Graduate Studies Research Center Athens, GA 30602-7411		FOR OFFICIAL USE ONLY PVPO NUMBER #200800004

## PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g.,    or   ) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: \_\_\_\_\_ Please answer all questions for your variety; lack of response may delay progress of your application.

## 1. KIND:

- 1 = Common  
2 = Durum  
3 = Club  
4 = Other (Specify) \_\_\_\_\_

## 2. VERNALIZATION:

- 1 = Spring  
2 = Winter  
3 = Other (Specify) \_\_\_\_\_

## 3. COLEOPTILE ANTHOCYANIN:

- 1 = Absent                      2 = Present

## 4. JUVENILE PLANT GROWTH:

- 1 = Prostrate              2 = Semi-Erect              3 = Erect

## 5. PLANT COLOR: (boot stage)

- 1 = Yellow-Green  
2 = Green  
3 = Blue-Green

## 6. FLAG LEAF: (boot stage)

- 1 = Erect                      2 = Recurved  
 1 = Not Twisted              2 = Twisted  
 1 = Wax Absent              2 = Wax Present

## 7. EAR EMERGENCE:

Number of Days (Average)

Number of Days Earlier Than \*

Same As \*

Number of Days Later Than \*

\* AGS 2000

\*Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

## 8. ANTHOR COLOR:

- 1 = Yellow      2 = Purple

**9. PLANT HEIGHT:** (from soil to top of head, excluding awns)

cm (Average)

cm Taller Than

Same As AGS 2000cm Shorter Than PIO 26R61**10. STEM:****A. ANTHOCYANIN**

1 = Absent 2 = Present

**B. WAXY BLOOM**

1 = Absent 2 = Present

**C. HAIRINESS** (last internode of rachis)

1 = Absent 2 = Present

**D. INTERNODE**

1 = Hollow 2 = Semi-Solid 3 = Solid

Number of Nodes

**E. PEDUNCLE**

1 = Erect 2 = Recurved 3 = Semi-Erect

cm Length

**F. AURICLE**

Anthocyanin: 1 = Absent 2 = Present

Hair: 1 = Absent 2 = Present

**11. HEAD: (At Maturity)****A. DENSITY**1 = Lax  
2 = Middense (Laxidense)  
3 = Dense**B. SHAPE**1 = Tapering  
2 = Strap  
3 = Clavate  
4 = Other (Specify) \_\_\_\_\_**C. CURVATURE**1 = Erect  
2 = Inclined  
3 = Recurved**D. AWNEDNESS**1 = Awnless  
2 = Apically Awnletted  
3 = Awnletted  
4 = Awned**12. GLUMES: (At Maturity)****A. COLOR**1 = White  
2 = Tan  
3 = Other (Specify) \_\_\_\_\_**B. SHOULDER**1 = Wanting 2 = Oblique  
3 = Rounded 4 = Square  
5 = Elevated 6 = Apiculate  
7 = Other (Specify) \_\_\_\_\_**C. SHOULDER WIDTH**1 = Narrow  
2 = Medium  
3 = Wide**D. BEAK**1 = Obtuse  
2 = Acute  
3 = Acuminate**E. BEAK WIDTH**1 = Narrow  
2 = Medium  
3 = Wide**F. GLUME LENGTH**1 = Short (ca. 7 mm)  
2 = Medium (ca. 8 mm)  
3 = Long (ca. 9 mm)**G. WIDTH**1 = Narrow (ca. 3 mm)  
2 = Medium (ca. 3.5 mm)  
3 = Wide (ca. 4 mm)**H. PUBESCENCE**1 = Not Present  
2 = Present

2008 0000 4

## 13. SEED:

## A. SHAPE

- ☐ 2 1 = Ovate  
2 = Oval  
3 = Elliptical

## B. CHEEK

- ☐ 1 1 = Rounded  
2 = Angular

## C. BRUSH

- ☐ 2 1 = Short  
2 = Medium  
3 = Long
- ☐ 1 1 = Not Collared  
2 = Collared

## D. CREASE

- ☐ 1 1 = Width 60% or less of Kernel  
2 = Width 80% or less of Kernel  
3 = Width Nearly as Wide as Kernel

- ☐ 2 1 = Depth 20% or less of Kernel  
2 = Depth 35% or less of Kernel  
3 = Depth 50% or less of Kernel

## E. COLOR

- ☐ 3 1 = White  
2 = Amber  
3 = Red  
4 = Other (Specify) \_\_\_\_\_

## F. TEXTURE

- ☐ 2 1 = Hard  
2 = Soft  
3 = Other (Specify) \_\_\_\_\_

## G. PHENOL REACTION (See Instructions)

- ☐ 5 1 = Ivory  
2 = Fawn  
3 = Light Brown  
4 = Dark Brown  
5 = Black

## H. SEED WEIGHT

- ☐ 3 ☐ 9 g/1000 Seed (whole number only)

## I. GERM SIZE

- ☐ 2 1 = Small  
2 = Midsized  
3 = Large

## 14. DISEASE: PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

(0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Stem Rust ( <i>Puccinia graminis</i> f. sp. <i>tritici</i> ) | <input type="checkbox"/> 2 Leaf Rust ( <i>Puccinia recondita</i> f. sp. <i>tritici</i> )                    | BBBD, NBBK, SBDD, THBJ, MCRK, TBBF, TLCK, <del>TWRJ</del> , MCDS |
| <input type="checkbox"/> Stripe Rust ( <i>Puccinia striiformis</i> )                  | <input type="checkbox"/> Loose Smut ( <i>Ustilago tritici</i> )   |  |
| <input type="checkbox"/> Tan Spot ( <i>Pyrenophora tritici-repentis</i> )             | <input type="checkbox"/> Flag Smut ( <i>Urocystis agropyri</i> )  |  |
| <input type="checkbox"/> Halo Spot ( <i>Selenophoma donacis</i> )                     | <input type="checkbox"/> Common Bunt ( <i>Tilletia tritici</i> or <i>T. laevis</i> )                        |  |
| <input type="checkbox"/> Septoria nodorum (Glume Blotch)                              | <input type="checkbox"/> Dwarf Bunt ( <i>Tilletia controversa</i> )   |  |
| <input type="checkbox"/> Septoria avenae (Speckled Leaf Disease)                      | <input type="checkbox"/> Karnal Bunt ( <i>Tilletia indica</i> )   |  |
| <input type="checkbox"/> Septoria tritici (Speckled Leaf Blotch)                      | <input type="checkbox"/> 2 Powdery Mildew ( <i>Erysiphe graminis</i> f. sp. <i>tritici</i> )                |  |
| <input type="checkbox"/> Scab ( <i>Fusarium</i> spp.)                                 | <input type="checkbox"/> "Snow Molds"   |  |
| <input type="checkbox"/> "Black Point" (Kernel Smudge)                                | <input type="checkbox"/> Common Root Rot ( <i>Fusarium</i> , <i>Cochliobolus</i> and <i>Bipolaris</i> spp.) |  |
| <input type="checkbox"/> Barley Yellow Dwarf Virus (BYDV)                             | <input type="checkbox"/> Rhizoctonia Root Rot ( <i>Rhizoctonia solani</i> )                                 |  |
| <input type="checkbox"/> 2 Soilborne Mosaic Virus (SBMV)                              | <input type="checkbox"/> Black Chaff ( <i>Xanthomonas campestris</i> pv. <i>translucens</i> )               |  |
| <input type="checkbox"/> Wheat Yellow (Spindle Streak) Mosaic Virus                   | <input type="checkbox"/> Bacterial Leaf Blight ( <i>Pseudomonas syringae</i> pv. <i>syringae</i> )          |  |
| <input type="checkbox"/> Wheat Streak Mosaic Virus (WSMV)                             | <input type="checkbox"/> Other (Specify) _____  |  |
| <input type="checkbox"/> Other (Specify) _____  | <input type="checkbox"/> Other (Specify) _____  |  |
| <input type="checkbox"/> Other (Specify) _____  | <input type="checkbox"/> Other (Specify) _____  |  |
| <input type="checkbox"/> Other (Specify) _____  | <input type="checkbox"/> Other (Specify) _____  |  |

## 15. INSECT: (0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

- ☐ 2 Hessian Fly (*Mayetiola destructor*) B, E, C
- ☐ Stem Sawfly (*Cephus* spp.)
- ☐ Cereal Leaf Beetle (*Oulema melanopa*)
- ☐ Other (Specify) \_\_\_\_\_
- ☐ Other (Specify) \_\_\_\_\_
- ☐ Other (Specify) \_\_\_\_\_



#200800004

Exhibit C (Wheat)

15. INSECT: (continued) (0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)

PLEASE SPECIFY BIOTYPE (Where Needed)

<input type="checkbox"/>	Russian Aphid ( <i>Diuraphis noxia</i> )	<input type="checkbox"/>	Other (Specify) _____
<input type="checkbox"/>	Greenbug ( <i>Schizaphis graminum</i> )	<input type="checkbox"/>	Other (Specify) _____
<input type="checkbox"/>	Aphids	<input type="checkbox"/>	Other (Specify) _____

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:

**Exhibit D****Additional Description of 96229-3A41**

96229-3A41 is a common soft red winter wheat, *Triticum aestivum* L. bred and developed by the University of Georgia, Georgia Agricultural Experiment Stations and developed by Jerry W. Johnson. 96229-3A41 is a medium maturing, high yielding, excellent test weight, apically awnletted wheat with resistance to current races of leaf rust, *Puccinia recondita* (Roberge ex Desmaz), and stripe rust, *Puccinia striiformis* Westend and resistant to biotype B, C, and E of Hessian flies, (*Mayetiola destructor* (Say)), and resistant to powdery mildew, (*Erysiphe graminis* DC. f. sp. *tritici* Em. Marchal). 96229-3A41 is resistant to leaf rust races, BBBB, NBBK, SBDD, THBJ, MCRK, TBBF, TLGK, TNRJ, and MCDS.

Milling and baking quality characteristics of 96229-3A41 are rated as acceptable for soft red winter wheat use by the USDA-Soft Wheat Quality Laboratory, Wooster, OH. Information on the milling and baking quality characteristics is also included in a quality report. Additional information is presented in attachment to the Exhibit.

**ATTACHMENT I****APPLICATION FOR APPROVAL OF X CULTIVARS \_\_\_ ASSOCIATE CULTIVARS****(Please check appropriate type of application)**

1. Crop: Wheat
2. Experimental no. or name: GA 96229-3A41
3. Pedigree and history: GA 881130 / 2\* GA 881582. The final cross was made in the fall of 1996. Individual spike selections were made in the F2 to F5 generations at Plains, GA. The pedigree method of breeding was used to advance the segregating populations. In 2001 a headrow was harvested for preliminary evaluations. Agronomic evaluations were conducted from 2004 to 2005 in the Small Grain State Performance Trials for Georgia. It was evaluated in 2005 in the Uniform Southern Wheat Nursery.
4. Description: GA 96229-3A41 is a medium maturing, white chaffed, medium-tall height line. Its maturity is similar to AGS 2000 with an average of 1 day later in Georgia. It is resistant to current biotypes (B and E) of Hessian fly in Georgia and is resistant to races of powdery mildew, leaf rust and stripe rust in Georgia. It also is resistant to wheat soil-borne mosaic virus. GA 96229-3A41 has an excellent combination of resistance to diseases (powdery mildew, stripe rust, leaf rust, and soil-borne mosaic virus).
5. Station(s) where developed: Griffin Campus
6. Participating scientist(s): Jerry Johnson and G. David Buntin
7. In what respect is the new cultivar superior to the cultivar now in use? or reasons for proposing release as an associate cultivar.

GA 96229-3A41 is a high-yielding, medium maturing, and good test weight soft red winter wheat line (Tables 1, 2, 4, 5, and 6).

In 2003 and 2004 at multi-locations in the Georgia and the region, it was better than AGS 2000 in grain yield (Tables 1, and 2).

It has better stripe rust and soil-borne virus resistance than AGS 2000 (Tables 3 and 7).

It is equal or better than AGS 2000 for powdery mildew and leaf rust resistance (Table 3 and 7) and Hessian fly (Table 8).

In the Uniform Southern Trial during 2005, it ranked number 1 for grain yield over 21 locations and yielded better than the two checks (AGS 2000 and PIO 26R61).

For grain yield in the Georgia Performance Trials, it was lower than AGS 2000 and equal to PIO26R61 (Table 4). However, in our state elite test at 3 locations in Georgia during 2004-2005, GA 96229-3A41 was equal in grain yield to the two checks, mainly due to its resistance to stripe rust and the susceptibility of AGS 2000 in 2004 (Table 5).

8. Method of propagation: Seed

9. Amount of breeder seed stocks available (if applicable): 60 bu.

10. Amount of foundation seed stocks available (if applicable): 2000 bushel in summer of 2006.

11. Amount of cutting or bud material available for vegetative propagated material for nursery distribution (if applicable):

12. Is there likely to be unusual difficulty encountered in the production of any class of seed stocks? Explain. No

13. Three suggested names for the cultivar: GA 96229-3A41

14. Name approved by plant cultivar and germplasm release committee: GA 96229-3A41

15. Form of intellectual property protection: Plant Variety Protection

16. Is a royalty assessment recommended: ☒ Yes ☐ No

#200800004

GA 96229-3A41

**RECOMMENDED BY:**

A. \_\_\_\_\_  
**Originating Scientist**

B. \_\_\_\_\_  
**Department Head**

C. \_\_\_\_\_  
**Assistant Dean**

D. \_\_\_\_\_  
**Chairperson, GAES Plant Cultivar  
and Germplasm Release Committee**

E. \_\_\_\_\_  
**Associate Dean for Research**

**APPROVED:**

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**Dean and Director  
College of Agricultural & Environmental Sciences**

Table 1. Average Performance of GA 96229-3A41 and Checks in Elite Nursery Multilocations\*, 2003.

Entry	Yield bu/A	Test Wt. lbs/bu	Head Date Julian	Height inches
GA 96229-3A41	69a	59a	97a	37ab
AGS 2000	65ab	54b	100a	36ab
PIO 26R61	58b	59a	99a	38a

\* Tifton, Plains, Griffin, Marianna and Quincy, FL, and Belle Mina, AL

Table 2. Average Performance of GA 96229-3A41 and Checks in Multi-State\* Performance Trials (GAWN), 2004.

Entry	Yield bu/A	Test Wt. lbs/bu	Head Date Julian	Height inches
GA 96229-3A41	82a	58a	102b	35a
AGS 2000	69b	57a	101b	34a
McCormick	72b	58a	105a	31b

\*Florida, Georgia, Arkansas, Louisiana, Virginia

Table 3. Average Agronomic Traits of GA 96229-3A41 and Checks in Multi-State\* Performance Trials (GAWN), 2004.

Entry	Lodging 0-9	P. Mildew 0-9	Leaf Rust 0-9	Stripe Rust 0-9
GA 96229-3A41	0.0a	1.0b	0.8a	0.0b
AGS 2000	1.0a	4.0a	0.3a	3.0a
McCormick	0.9a	3.0a	0.4a	1.1b

\*Florida, Georgia, Arkansas, Louisiana, Virginia

Table 4. Average Performance of GA 96229-3A41 and Checks in Georgia's State Performance Trials in Georgia, 2-Yr Ave, 2004-2005.

Entry	Yield bu/A	Test Wt. lbs/bu	Head Date Julian	Height inches
GA 96229-3A41	91.4b	58a	94a	40a
AGS 2000	97.5a	59a	93a	40a
PIO 26R61	88.9b	59a	95a	41a

Table 5. Average Performance of GA 96229-3A41 and Checks in State Elite Nursery at 3 locations in Georgia, 2-Yr Ave, 2004-2005.

Entry	Yield bu/A	Test Wt. lbs/bu	Head Date Julian	Height inches
GA 96229-3A41	91.5a	58a	94a	35b
AGS 2000	87.5a	58a	93a	34b
PIO 26R61	88.9a	59a	91a	38a

Plains, Griffin, Calhoun

Table 6. Average Performance of GA 96229-3A41 and Checks in Uniform Southern Soft Red Winter Nursery, 2005

Entry	Yield bu/A	Test Wt. lbs/bu	Head Date Julian	Height inches
GA 96229-3A41	86.3a	59ab	121a	36a
AGS 2000	71.0b	58b	119b	37a
PIO 26R61	75.6b	60a	120ab	38a

21 locations in the Southern Region

Table 7. Average Agronomic Traits of GA 96229-3A41 and Checks in Uniform Southern Soft Red Winter Nursery, 2005.

Entry	Soil-Borne Virus 0-9	Leaf Rust 0-9	Stripe Rust 0-9	P. Mildew 0-9
GA 96229-3A41	0b	0.1a	0.1b	0.2a
AGS 2000	7a	1.0a	3.9a	0.5a
PIO 26R61	0b	1.4a	0.7b	1.6a

Table 8. Evaluation of lines to biotypes of Hessian Fly, USDA-ARS Lab, Purdue University, 2005.

Entry	Biotype B R:S	Biotype D R:S	Biotype E R:S	Biotype L R:S
GA 96229-3A41	16-1	4-15	13-0	0-20
AGS 2000	0-16	0-15	3-11	0-12
PIO 26R61	2-12	0-11	14-0	0-18

## LEAF RUST

St. Paul

MN

Long

Reactions produced by NA race\* \*\*

Postulated

		BBBD	NBBK	SBDD	THBJ	MCRK	MLDS	TBBF	TLGK	TNRJ	MCDS	Genes***
1	AGS 2000	:	:	:	3	3	-	:	:	:	1C	10,26,+
2	USG 3209	:	:	:	:	3	:	:	:	1c	1C	11,26
3	Pioneer 26R61	:	:	:	1c2	:	:	1c	:	1c	1C2	+
4	McCormick	:	:	:	:	:	:	:	:	3	:	24
5	TN04-01	:	:	:	1c2	:	:	:	:	:	:	+
6	NC00-15332	:	:	:	:	:	:	:	1c2	3-	:	24,+
7	MV 5-46	:	:	:	3	:	:	:	1c1	:	3	26,+
8	SC996284	:	:	:	:	:	:	:	:	:	1c2	+
9	SC996289	:	:	:	:	3	:	1c	:	1c	1c2	11,26
10	961526-3E15	:	:	:	3	3	:	:	-3	:	1c	+
11	961176-3A48	:	:	:	:	:	:	:	3	:	1c1	9,18
12	96229-3A41	:	:	:	:	:	1	:	:	:	+	++
13	951395-3A31	:	:	:	:	1c	:	:	:	:	1c	+
14	B990081	-3	3	:	3	3	3	1c2	3	3	3	10,+
15	B990133	:	:	:	:	:	3	:	3	3	:	9
16	B990399	:	:	:	3	1c	:	:	3	:	1c3	+
17	B990816	:	:	:	:	:	3	:	3	3	:	9
18	LA95181BUB40-1	:	:	:	:	:	:	:	3	3	:	2a,9
19	LA96140BUA70-2	:	:	-	-	:	3	:	3	3	:	9
20	LA95135D54-2-3	:	:	:	:	:	:	:	:	3	:	9,24
21	AR 850-1-1	:	:	1c	:	3	:	1c	:	:	1c2	11,26
22	AR 93027-5-1	:	:	3	3	:	:	-	:	3	:	+
23	FL9547-B15-C1-D3	:	:	1c2	:	:	:	:	:	:	-3	+
24	FL95345-A10-C5	:	:	:	:	3	:	:	:	:	1c2	11,26
25	FL99089-D35	:	3	:	3	3	3	1c2	3	3	3	10,+
26	D00*6874-9	:	:	:	:	3	:	1c	3	3	:	11
27	D00*6874-2	:	:	:	1c	3	:	1c	3	3	:	11
28	D01-7017	:	3-	:	3	3	3	3	3	3	:	10,+
29	D01*7759	3-	3	3-	3	3	3	3	3	3	3	0
30	VA01W-21	:	:	:	3-	3	:	:	:	1c	3	26,+
31	VA02W-513	:	:	:	:	3	:	:	:	:	1c	11,26
32	VA02W-555	:	:	:	:	3	:	:	:	:	1c	11,26
33	VA02W-370	:	3	:	:	3	:	:	3	:	1c2	18,+
34	981543A1-1-9-3	:	:	:	3	3	:	:	:	:	3	26,+
35	99751RA1-6-3	:	:	:	:	3	2	:	:	:	1c	11,26
36	NC01-27750	:	:	:	:	:	:	:	:	1c2	:	+
37	NC00-15371	:	:	:	:	:	:	:	3	3	:	2a,9,+
38	NC01-28087	:	:	:	:	3	:	:	:	:	1c	11,26,+
39	G20412	3	3	3	3	3	3	3	3	3	3	0
40	G20921	-	:	:	3	3	3	3	3	3	3	3
41	G20922	:	3	:	3	3	-	-	3	3	-	0

\* Single genes tested: = 1,2a,2c,3,3Ka,9,10,11,14a,16,17,18,24,26,30,B

\*\* Virulence formula:

BBDB=14a

NBBK=1,2c,10,14a,18

SBDD=1,2a,2c,,14a,17

THBJ=1,2a,2c,3,10, 14a,16,26

MCRK=1,3,3ka,10,11,14a,18,26,30

MLDS=1,3,9,10,14a,17,B

TBBF=1,2a,2c,3,14a,18

TLGJ=1,2a,2c,3,9,10,11,14a

TNRJ=1,2a,2c,3,3ka,9,10,11,14a,24,30

MCDS=1,3,10,14a,17,26,B

\*\*\* +=Lr gene(s) present but unable to identify with these Lr virulence combinations

Note: MCRK, MCDS, and TNRJ were the most commonly races identified in the U.S. in 2004.



#200800004

## STEM RUST

St. Paul  
MN

Yue Jin

Seedling Reaction

Adult Field Reaction

	01MN 84A-1-2	74MN 1049	03ND76C	77ND82A	99KS76A-1	Severity	Infection response	winter kill %
	TTTT	TPMK	QFCS	RCRS	RKQQ			
1 AGS 2000	,1	2/S	2-	,1	,1/S			100
2 USG 3209	,12-	1+	0;	1	;			100
3 Pioneer 26R61	2-	2-	1	1	1	0		99
4 McCormick	2-	2-	1+	1	1			100
5 TN04-01	2-	2-	2	1	1-	0		99
6 NC00-15332	1+	2	12	1+	;	0		60
7 MV 5-46	0,1	0,2-	1+	1/S	1+	0		99
8 SC996284	S	0;	,4	,3	;			100
9 SC996289	S	0;	,4	,4	;			100
10 961526-3E15	1	2-	,1+	1	1+			100
11 961176-3A48	S	0;	0/S	0/S	0			100
12 96229-3A41	S/12	0?	;	S	0;			100
13 951395-3A31	0	0?	0	0;	0			100
14 B990081	S	S	S	S	S			100
15 B990133	S	S	;	S	S			100
16 B990399	2-	2-	2-	1	1	TR		95
17 B990816	2-	2	1+	1+	1+	0		80
18 LA95181BUB40-1	-	0;12	;	S	;	TS		90
19 LA96140BUA70-2	,12	0;	0	0	0			100
20 LA95135D54-2-3	S	2-	-	-	S			100
21 AR 850-1-1	S	-	2-/S	2+	S	60	S	70
22 AR 93027-5-1	S	2/S	2	S	S	40	S	70
23 FL9547-B15-C1-D3	S	S	0	S	,123			100
24 FL95345-A10-C5	,1	0;	0	0;	0;			100
25 FL99089-D35	S	S	S/2	S low IF	S			100
26 D00*6874-9	S	S	S	S	S	10	MS-S	90
27 D00*6874-2	S	S	S	S	S			100
28 D01-7017	S/2	S	2	S	S/S			100
29 D01*7759	S	2	2-	S	S (1PL)			100
30 VA01W-21	1-/S	-	1	1/3	1			100
31 VA02W-513	S	0;	0	S	S			100
32 VA02W-555	;	0;	0	1+	1			100
33 VA02W-370	S	S	2+	S	S			100
34 981543A1-1-9-3	1	-	,1	,1	,1	0		90
35 99751RA1-6-3	;	-	0	;	;			100
36 NC01-27750	1+	2-	1	1	0;			100
37 NC00-15371	S	S	S	S	S			100
38 NC01-28087	0,1	,1	0	1	0			100
39 G20412	S	2-	-	S	S	30	S	80
40 G20921	1	S	S	S	S	40	S	90
41 G20922	,2	S	S	S	S			80

DATE 1/27/2005 1/27/05 2/28/2005 3/1/2005 3/1/2005

"/" indicates a mixture of plants, predominant type listed first. "S" indicate susceptible, including infection types 3 or 4.

Bulk of races for field inoculation: MCCF, QFCS, QTHJ, RCRS, RKQQ, TPMK, TTTT.

## STRIPE RUST

Mt. Vernon  
WA

Chen

	IT 0-8	%	IT 0-8	%
1 AGS 2000				
2 USG 3209				
3 Pioneer 26R61				
4 McCormick				
5 TN04-01				
6 NC00-15332				
7 MV 5-46				
8 SC996284	8	80	8	100
9 SC996289	8	80	8	100
10 961526-3E15	8	80	8	100
11 961176-3A48	5	40	2	20
12 96229-3A41	5	10	2	2
13 951395-3A31	5	10	2	20
14 B990081	8	60	5	20
15 B990133	8	60	8	70
16 B990399	5	60	2	2
17 B990816	8	100	8	100
18 LA95181BUB40-1	8	80	8	90
19 LA96140BUA70-2	2	10	2	1
20 LA95135D54-2-3	5	10	2	2
21 AR 850-1-1	5	10	2	2
22 AR 93027-5-1	8	60	8	100
23 FL9547-B15-C1-D3	8	40	8	70
24 FL95345-A10-C5	2	10	2	10
25 FL99089-D35	8	80	8	100
26 D00*6874-9	2	10	2	10
27 D00*6874-2	2	10	2	10
28 D01-7017	5	20	8	20
29 D01*7759	5	20	2	10
30 VA01W-21	8	80	8	100
31 VA02W-513	8	60	8	100
32 VA02W-555	2	10	2	5
33 VA02W-370	5	40	5	20
34 981543A1-1-9-3	5	20	2,8	90
35 99751RA1-6-3	8	40	8	90
36 NC01-27750	8	40	8	100
37 NC00-15371	8	80	8	100
38 NC01-28087	8	80	8	100
39 G20412	8	80	8	100
40 G20921	8	80	8	100
41 G20922	8	80	8	100

## LOCATION MEANS

GROWTH STAGE / DATE

April 22 - Stem elongation

May 25 - Heading

## POWDERY MILDEW

Blacksburg

VA

Griffey

	PM05 Comp		PM gene	PM05 Comp
1 AGS 2000	23	Pm differential Chancellor	Susc	4
2 USG 3209	0	Pm differential Axminster	Pm 1	3
3 Pioneer 26R61	0	Pm differential C68-15*7/CI 13836	Pm 1	3
4 McCormick	1	Pm differential Ulka	Pm 2	4
5 TN04-01	4	Pm differential Asosan	Pm 3a	4
6 NC00-15332	23	Pm differential Chul	Pm 3b	1
7 MV 5-46	2	Pm differential Sonora*	Pm 3c	4
8 SC996284	23	Pm differential C68-15*6/Sonora	Pm 3c	4
9 SC996289	3	Pm differential C68-15*6/Trit	Pm 3c	34
10 961526-3E15	0/TR4	Pm differential Michigan Amber	Pm 3f	4
11 961176-3A48	4	Pm differential Yuma	Pm 4a	4
12 96229-3A41	0	Pm differential C68-15*5/Yuma	Pm 4a	4/1
13 951395-3A31	0	Pm differential C68-15*5/Kapli	Pm 4a	4/1
14 B990081	4	Pm differential Ronos	Pm 4b	4
15 B990133	4	Pm differential Hope	Pm 5	34
16 B990399	3	Pm differential C747*	Pm 6	4
17 B990816	3	Pm differential Transec*	Pm 7	4
18 LA95181BUB40-1	3	Pm differential C68-15*7/Transec	Pm 7	3
19 LA96140BUA70-2	34	Pm differential Federation/Kavkaz	Pm 8	12
20 LA95135D54-2-3	23	Pm differential Amigo	Pm 17	0
21 AR 850-1-1	4	Pm differential C68-15*5//747/Amigo	Pm 17	0
22 AR 93027-5-1	4			
23 FL9547-B15-C1-D3	12			
24 FL95345-A10-C5	0			
25 FL99089-D35	3			
26 D00*6874-9	4			
27 D00*6874-2	4			
28 D01-7017	4			
29 D01*7759	4			
30 VA01W-21	12			
31 VA02W-513	34			
32 VA02W-555	34			
33 VA02W-370	34			
34 981543A1-1-9-3	01/4			
35 99751RA1-6-3	01/TR4			
36 NC01-27750	4			
37 NC00-15371	4			
38 NC01-28087	34			
39 G20412	4			
40 G20921	4			
41 G20922	4			

## HESSIAN FLY

W. Lafayette

IN

Cambron

		Biotype B	Biotype C	Biotype D	Biotype E	Biotype L
1	AGS 2000	0-16	0-15	0-15	3-11	0-12
2	USG 3209	12-2	0-15	0-16	13-2	0-15
3	Pioneer 26R61	2-12	0-15	0-11	14-0	0-18
4	McCormick	0-16	0-17	0-18	0-13	0-16
5	TN04-01	0-15	0-15	0-16	0-16	0-12
6	NC00-15332	0-18	0-20	0-15	8-5	0-15
7	MV 5-46	0-19	0-16	0-12	0-14	0-16
8	SC996284	13-1	3-11	11-4	14-0	11-5
9	SC996289	16-0	4-14	11-2	14-0	14-4
10	961526-3E15	0-16	0-15	0-15	0-12	0-17
11	961176-3A48	18-0	15-0	16-0	14-0	20-0
12	96229-3A41	16-1	17-0	4-15	13-0	0-20
13	951395-3A31	0-19	0-15	0-15	0-15	0-16
14	B990081	12-3	0-15	0-15	17-0	0-18
15	B990133	14-1	0-15	0-16	16-0	0-17
16	B990399	0-15	0-15	0-15	0-16	0-15
17	B990816	0-17	0-14	0-16	0-11	0-19
18	LA95181BUB40-1	0-15	0-14	0-13	15-0	0-17
19	LA96140BUA70-2	0-18	0-19	0-17	2-14	0-19
20	LA95135D54-2-3	1-12	6-8	0-16	0-16	0-14
21	AR 850-1-1	0-18	0-16	0-16	0-16	0-17
22	AR 93027-5-1	8-8	2-13	1-17	13-2	0-16
23	FL9547-B15-C1-D3	0-14	11-2	0-14	10-5	0-16
24	FL95345-A10-C5	0-14	0-15	0-13	0-17	0-19
25	FL99089-D35	0-17	0-18	0-18	8-9	0-20
26	D00*6874-9	0-19	0-16	0-18	0-18	0-18
27	D00*6874-2	0-17	0-16	0-17	0-16	0-17
28	D01-7017	0-19	0-14	0-17	0-18	0-17
29	D01*7759	12-4	0-17	0-14	15-0	0-20
30	VA01W-21	0-17	0-15	0-18	0-17	0-15
31	VA02W-513	0-16	0-15	0-19	0-12	0-17
32	VA02W-555	0-18	0-14	0-15	0-13	0-18
33	VA02W-370	18-0	14-4	8-5	15-0	0-19
34	981543A1-1-9-3	0-17	2-12	0-20	0-12	0-16
35	99751RA1-6-3	11-3	3-9	4-12	9-0	10-4
36	NC01-27750	0-18	0-16	0-16	0-17	0-20
37	NC00-15371	0-15	0-16	0-15	0-16	0-17
38	NC01-28087	0-15	0-13	0-15	12-0	0-18
39	G20412	10-3	0-16	0-17	13-0	0-14
40	G20921	10-4	0-18	0-16	17-0	0-14
41	G20922	12-2	0-13	0-13	14-0	0-17

# ADVANCED NURSERY EVALUATION FOR SOFT WHEAT MILLING AND BAKING QUALITY

LAB NO.	Samples composited from Bay AR, Belle Mina AL, Evansville IN, Queenstown MD, Newton MS, Knoxville TN, Warsaw VA			MILLING QUALITY SCORE		BAKING QUALITY SCORE		TEST WT. SCORE		SOFT. EQUIV. SCORE		MICRO T.W. LB/BU	
	STANDARD (#2502, USG 3209)			53.2	D	43.0	E	58.3	D	58.3	D	61.1	
2501	1	AGS 2000		66.9	C	68.7	C	61.8	C	67.2	C	61.5	
2502	2	USG 3209		53.2	D	43.0	E	58.3	D	58.3	D	61.1	
2503	3	Pioneer 26R61		53.4	D	52.3	D	71.7	B	55.4	D	62.7	
2504	4	McCormick		59.3	D	63.0	C	65.1	C	76.4	B	61.9	
2505	5	TN04-01		63.6	C	65.7	C	82.7	A	64.4	C	64.0	
2506	6	NC00-15332		40.0	E	66.3	C	48.7	E	67.0	C	59.9	
2507	7	MV 5-46		51.8	D	66.0	C	61.8	C	66.2	C	61.5	
2508	8	SC996284		56.3	D	60.3	C	71.8	B	77.0	B	62.7	
2509	9	SC996289		53.0	D	41.7	E	65.8	C	74.2	B	62.0	
2510	10	961526-3E15		51.2	D	62.3	C	62.1	C	69.9	C	61.5	
2511	11	961176-3A48		47.6	E	27.7	F	71.9	B	62.8	C	62.7	
2512	12	96229-3A41		52.5	D	59.0	D	63.8	C	64.7	C	61.7	
2513	13	951395-3A31		64.0	C	48.0	E	65.4	C	58.6	D	61.9	
2514	14	B990081		56.8	D	84.7	A	65.6	C	65.5	C	61.9	
2515	15	B990133		58.9	D	77.3	B	68.7	C	66.9	C	62.3	
2516	16	B990399		66.1	C	73.0	B	76.0	B	61.1	C	63.2	
2517	17	B990816		65.8	C	79.0	B	69.5	C	55.0	D	62.4	
2518	18	LA95181BUB40-1		56.9	D	81.0	A	52.3	D	83.8	A	60.3	
2519	19	LA96140BUA70-2		52.2	D	68.0	C	68.5	C	54.2	D	62.3	
2520	20	LA95135D54-2-3		49.9	E	51.0	D	49.1	E	81.4	A	60.0	
2521	21	AR 850-1-1		68.4	C	69.0	C	55.7	D	69.2	C	60.7	
2522	22	AR 93027-5-1		55.4	D	72.7	B	55.4	D	78.8	B	60.7	
2523	23	FL9547-B15-C1-D3		68.0	C	79.7	B	48.8	E	63.5	C	59.9	
2524	24	FL95345-A10-C5		53.6	D	52.0	D	72.3	B	54.2	D	62.7	
2525	25	FL99089-D35		57.9	D	64.7	C	70.6	B	54.5	D	62.5	
2526	26	D00*6874-9		49.2	E	60.3	C	66.5	C	68.7	C	62.0	
2527	27	D00*6874-2		49.4	E	47.7	E	68.1	C	64.6	C	62.2	
2528	28	D01-7017		45.9	E	55.7	D	53.4	D	65.7	C	60.5	
2529	29	D01*7759		59.7	D	60.7	C	57.3	D	76.7	B	60.9	
2530	30	VA01W-21		49.7	E	60.7	C	65.4	C	64.9	C	61.9	
2531	31	VA02W-513		48.4	E	49.0	E	66.4	C	57.3	D	62.0	
2532	32	VA02W-555		53.3	D	65.7	C	56.1	D	59.4	D	60.8	
2533	33	VA02W-370		50.8	D	50.7	D	70.2	B	61.4	C	62.5	
2534	34	981543A1-1-9-3		53.6	D	46.3	E	68.3	C	62.1	C	62.3	
2535	35	99751RA1-6-3		40.1	E	44.0	E	50.4	D	64.2	C	60.1	
2536	36	NC01-27750		54.1	D	58.3	D	50.7	D	61.4	C	60.1	
2537	37	NC00-15371		58.2	D	67.0	C	62.7	C	57.1	D	61.6	
2538	38	NC01-28087		48.9	E	89.7	A	53.5	D	75.5	B	60.5	
2539	39	G20412		51.3	D	65.7	C	51.7	D	66.3	C	60.3	
2540	40	G20921		43.7	E	34.3	F	67.8	C	53.9	D	62.2	
2541	41	G20922		41.0	E	53.3	D	66.4	C	49.9	E	62.0	

# ADVANCED NURSERY EVALUATION FOR SOFT WHEAT MILLING AND BAKING QUALITY

LAB NO.	Samples composited from Bay AR, Belle Mina AL, Evansville IN, Queenstown MD, Newton MS, Knoxville TN, Warsaw VA		FLOUR YIELD %	SOFT. EQUIV. %	FLOUR PROT. %	LACTIC ACID RET'N	COOKIE DIAM. CM.	TOP GR.
	STANDARD (#2502, USG 3209)		69.7	56.9	7.97	116.3	17.05	3
2501	1	AGS 2000	72.4	60.0	8.52	110.8	17.82	5
2502	2	USG 3209	69.7	56.9	7.97	116.3	17.05	3
2503	3	Pioneer 26R61	69.7	55.9	8.97	*	117.0	4
2504	4	McCormick	70.9	63.2	8.43		123.9	4
2505	5	TN04-01	71.7	59.0	9.22	*	106.1	4
2506	6	NC00-15332	67.0	Q	60.0	7.84	109.0	4
2507	7	MV 5-46	69.4	59.7	8.35		106.9	3
2508	8	SC996284	70.3	63.4	8.42		134.4	4
2509	9	SC996289	69.6	62.5	8.45		137.0	2
2510	10	961526-3E15	69.3	61.0	8.38		118.7	3
2511	11	961176-3A48	68.5	*	58.5	8.48	136.7	16.59 Q
2512	12	96229-3A41	69.5	59.2	8.39		133.7	17.53
2513	13	951395-3A31	71.8	57.0	8.20		106.0	17.20
2514	14	B990081	70.4	59.4	8.15		138.2	18.30
2515	15	B990133	70.8	59.9	8.67	*	140.5	18.08
2516	16	B990399	72.2	57.9	7.92		109.7	17.95
2517	17	B990816	72.2	55.8	8.12		118.0	18.13
2518	18	LA95181BUB40-1	70.4	65.8	7.15		119.6	18.19
2519	19	LA96140BUA70-2	69.5	55.5	9.01	*	117.6	17.80
2520	20	LA95135D54-2-3	69.0	65.0	7.89		123.5	17.29
2521	21	AR 850-1-1	72.7	60.7	8.05		127.2	17.83
2522	22	AR 93027-5-1	70.1	64.1	7.93		123.9	17.94
2523	23	FL9547-B15-C1-D3	72.6	58.7	8.10		135.4	18.15
2524	24	FL95345-A10-C5	69.7	55.5	8.91	*	116.7	17.32
2525	25	FL99089-D35	70.6	55.6	8.89	*	119.2	17.70
2526	26	D00*6874-9	68.9	*	60.5	8.47	115.0	17.57
2527	27	D00*6874-2	68.9	*	59.1	8.78	*	119.4
2528	28	D01-7017	68.2	*	59.5	8.40		139.9
2529	29	D01*7759	71.0		63.4	8.41		149.0
2530	30	VA01W-21	69.0	59.2	7.93		110.1	17.58
2531	31	VA02W-513	68.7	*	56.6	8.64	*	125.4
2532	32	VA02W-555	69.7	57.3	8.35		114.2	17.73
2533	33	VA02W-370	69.2	58.0	8.14		123.4	17.28
2534	34	981543A1-1-9-3	69.7	58.2	9.15	*	115.4	17.15
2535	35	99751RA1-6-3	67.0	Q	59.0	8.84	*	119.6
2536	36	NC01-27750	69.8	58.0	8.36		111.3	17.51
2537	37	NC00-15371	70.6	56.5	8.77	*	124.1	17.77
2538	38	NC01-28087	68.8	*	62.9	8.16		91.5
2539	39	G20412	69.3	59.7	8.47		117.3	17.73
2540	40	G20921	67.8	Q	55.4	8.45	135.1	16.79 *
2541	41	G20922	67.2	Q	54.0	9.08	*	133.5



U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

**EXHIBIT E  
STATEMENT OF THE BASIS OF OWNERSHIP**

1. NAME OF APPLICANT(S)  University of Georgia Research Foundation, Inc.	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER  GA96229-3A41	3. VARIETY NAME  8641
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)  627 Boyd Graduate Studies Research Center	5. TELEPHONE (Include area code)  (706) 542-1404	6. FAX (Include area code)  (706) 542-3837
7. PVPO NUMBER  <b>#200800004</b>		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain. ☒ YES ☐ NO9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country. ☒ YES ☐ NO10. Is the applicant the original owner? ☐ YES ☒ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☒ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

SEE ATTACHED.

**PLEASE NOTE:**

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**EXHIBIT E**  
**UNIVERSITY OF GEORGIA RESEARCH FOUNDATION, INC.**  
**APPLICATION FOR 96229-3A41**  
**ADDITIONAL EXPLANATION OF OWNERSHIP**

The variety for which plant variety protection is hereby sought was developed by Jerry Johnson and G. David Buntin employees at The University of Georgia Agricultural Experiment Stations. The Georgia Agricultural Experiment Stations are a part of The University of Georgia. The University of Georgia is one of the universities of The University System of Georgia. The Board of Regents of the University System of Georgia ("Board of Regents") is a body that was created by the Constitution of the State of Georgia. The University of Georgia Research Foundation, Inc. is a Georgia nonprofit corporation. It was incorporated, among other things, to own and exploit intellectual property developed or created at The University of Georgia. On June 9, 1982 the Board of Regents approved a Patent Policy regarding inventions and discoveries by persons employed at The University of Georgia. As an employee at The University of Georgia Agricultural Experiment Stations, Jerry Johnson and G. David Buntin is subject to said Patent Policy. Rights in novel plant varieties developed at The University of Georgia, including 96229-3A41 are covered by said Patent Policy. By agreement, the Board of Regents assigned to The University of Georgia Research Foundation, Inc. all rights in intellectual property covered by said Patent Policy. This agreement applies to then existing intellectual property and to intellectual property which was developed thereafter.



According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 5 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705**

**EXHIBIT F  
DECLARATION REGARDING DEPOSIT**

<b>NAME OF OWNER (S)</b>  University of Georgia Research Foundation, Inc.	<b>ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country)</b>  627 Boyd Graduate Studies Research Center Athens, GA 30602-7411	<b>TEMPORARY OR EXPERIMENTAL DESIGNATION</b>  GA96229-3A41  <b>VARIETY NAME</b> 8641
<b>NAME OF OWNER REPRESENTATIVE (S)</b>  Alisa Harkins Sohail Malik	<b>ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country)</b>  627 Boyd Graduate Studies Research Center Athens, GA 30602-7411	<b>FOR OFFICIAL USE ONLY</b>  <b>PVPO NUMBER</b> #200800004

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

  
 Signature

11 OCT 2007  
 Date